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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,312	11/08/2001	Tetsuro Toyoda	P21250	9239
7055	7590	05/11/2004	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			MARTINELL, JAMES	
			ART UNIT	PAPER NUMBER
			1631	
DATE MAILED: 05/11/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,312

Applicant(s)

TOYODA ET AL.

Examiner

James Martinell

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/25/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 110801.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1631

The disclosure is objected to because of the following informalities.

- (a) The preliminary amendment submitted September 25, 2003 is objected to because the alignments of the sequences in Tables 1, 8, 9, 10, 13, 14, and 15 have been destroyed by the amendment.
- (b) At page 38, line 2, "(Table15)" should be changed to "(Table 15)".
- (c) At page 38, line 3, "(table16)" should be changed to "(Table 16)".
- (d) SEQ ID NO: 2 on page 5 is not the same as SEQ ID NO: 2 on page 34. The page 5 SEQ ID NO: 2, amino acid 23 is "F" while the page 34 SEQ ID NO:2, amino acid 23 is "G".

Appropriate correction is required.

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. Embedded hyperlinks and/or other forms of browser-executable code appear in at least the following locations:

- (a) page 15, line 13,
- (b) page 20, line 18,
- (c) page 22, line 8,
- (d) page 24, line 6,
- (e) page 29, line 18,
- (f) page 36, lines 2, 4, 5, 7, 9-10, 11, 13, 14, 16, 17, 19, 20, and 22,
- (g) page 37, lines 1, 2, and 4, and
- (h) page 38, lines 10 and 11.

The amendment filed September 25, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original

Art Unit: 1631

disclosure is as follows: SEQ ID NO: 2 on page 34 contains new matter (see above) in that amino acid 23 is "G" and not "F" as in the Sequence Listing.

Applicant is required to cancel the new matter in the reply to this Office Action.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-11 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are vague and indefinite.

- (a) The recitation of "at least out of the information" (page 9) is vague and indefinite because it is not understood what the phrase means within the context of the claim.
- (b) The recitation of "using and depending on only and all of a data on a gap information and identifiers of sequences in a sequence information" (claims 11 and 13) is vague and indefinite because it is not understood what is meant by the passage within the context of the claims.
- (c) The recitation of "employs" (claims 14, 15, and 16) is vague and indefinite because it is not understood what the term means within the context of the claims.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The process claims (claims 1-11 and 14-16) do not define a statutory process

Art Unit: 1631

because they neither (a) result in a physical transformation nor (b) are related to a practical application within the technological arts (see MPEP 2106 IV, B., 2. (b)). The claimed data records (claims 12 and 13) are considered to be non-functional descriptive material (see MPEP 2106 IV, B., 1. (b)).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 7, 8, and 12-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schuler (in: *Bioinformatics: A Practical Guide to the Analysis of Genes and Proteins*, Baxeavanis et al (Eds.), 1998, Wiley-Liss, Inc., New York, pages 145-171). The claimed alignment methods that score for the presence of gaps embrace the alignment methods described in the reference (*e.g.*, see pages 146-155).

Art Unit: 1631

Claims 1-5, 7, 8, and 12-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schuler et al (PROTEINS: Structure, Function, and Genetics 9: 180 (1991)). The claimed alignment methods that score for the presence of gaps embrace the alignment methods described in the reference (*e.g.*, see Figure 7).

Claims 1-4, 7, 8, and 12-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Altschul et al (Nucleic Acids Res. 25 (17), 3389 (1997)). The claimed alignment methods that score for the presence of gaps embrace the alignment methods described in the reference (*e.g.*, see Figure 3).

Claims 1-8 and 12-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Baxeavanis (in: *Bioinformatics: A Practical Guide to the Analysis of Genes and Proteins*, Baxeavanis et al (Eds.), 1998, Wiley-Liss, Inc., New York, pages 172-188). The claimed alignment methods that score for the presence of gaps embrace the alignment methods described in the reference (*e.g.*, see pages 176-178).

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Schuler (in: *Bioinformatics: A Practical Guide to the Analysis of Genes and Proteins*, Baxeavanis et al (Eds.), 1998, Wiley-Liss, Inc., New York, Pages 145-171), Schuler et al (PROTEINS: Structure, Function, and Genetics 9: 180 (1991)), Altschul et al (Nucleic Acids Res. 25 (17), 3389 (1997)), or Baxeavanis (in: *Bioinformatics: A Practical Guide to the Analysis of Genes and Proteins*, Baxeavanis et al (Eds.), 1998, Wiley-Liss, Inc., New York, Pages 172-188) in view of Rigoutsos et al (U.S. Patent No. 5,977,890). the discussions of each of the primary references, hereinabove, are incorporated here. Rigoutsos et al teaches the compression and transmission of data (*e.g.*, see Abstract). It would have been obvious for one of ordinary skill in the art at the time the invention was made to compress and transmit the sequence alignment and gap data of any one of the primary references in the manner of Rigoutsos et al in order to achieve economy and speed of data storage and transmission.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Martinell whose telephone number is (571) 272-0719. The fax phone number for Examiner Martinell's desktop workstation is (571) 273-0719. The examiner works a flexible schedule and

Art Unit: 1631

can be reached by phone and voice mail. Alternatively, a request for a return telephone call may be e-mailed to [james.martinell@uspto.gov](mailto:james.martinell@uspto.gov). Since e-mail communications may not be secure, it is suggested that information in such requests be limited to name, phone number, and the best time to return the call.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-0722.

**PLEASE NOTE THE NEW FAX NUMBER**

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

  
James Martinell, Ph.D.  
Primary Examiner  
Art Unit 1631

5/14/07